

MEGATHEATERAVS500

DVD PLAYER/TUNER – PREAMPLIFIER

USER MANUAL

CAMBRIDGE
SOUNDWORKS®



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product.

WARNING

DO NOT OPEN

TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SPEAKER'S COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

AVISIQUE

POUR EVITER TOUT RISQUE DE CHOC ELECTRIQUE, NE PAS DEMONTER LE COUVERCLE DU HAUT PARLEUR. AUCUN ENTRETIEN DES PIECES INTERIEURES N'EST REQUIS. TOUT SERVICE D'ENTRETIEN NE DOIT ETRE EFFECTUE QUE PAR DU PERSONNEL D'ENTRETIEN QUALIFIE.

READ AND HEED IMPORTANT SAFETY WARNING ON REAR OF ENCLOSURE

CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, INSERT FULLY.

ATTENTION:

POUR EVITER LES CHOCES ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

IMPORTANT NOTICE:

THE SERIAL NUMBER FOR THE PRODUCT IS LOCATED ON THE REAR PANEL. PLEASE WRITE THIS NUMBER DOWN AND KEEP IT IN A SECURE AREA. THIS IS FOR YOUR SECURITY.

IMPORTANT SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All safety and operating instructions should be read before the product is operated.

RETAIN INSTRUCTIONS – The safety and operating instructions should be retained for future reference.

HEED WARNINGS – All warnings on the product and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

CLEANING – Unplug the product from the wall outlet or other power source before cleaning. Use a dry cloth for cleaning.

ATTACHMENTS – Do not use any adapters or attachments not recommended by Cambridge SoundWorks as they may cause hazards.

WATER AND MOISTURE – Do not use the product near water – for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool or other similar areas.

ACCESSORIES – Do not place the product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult and serious damage to the product.

VENTILATION – Any slots, openings and metal fins provided for ventilation must not be blocked or covered such as by placing the product on a bed, sofa, deep pile rug, or other similar surface. The product should not be placed in a built-in installation such as a bookcase or rack unless sufficient clearance is maintained to provide adequate ventilation.

HEAT – The product should be situated away from heat sources such as radiators, heat registers, stoves, and other products (including amplifiers) that produce heat.

POWER SOURCE – The product should be operated only from the type of power source indicated on the rear panel. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

POLARIZATION – The product is equipped with a polarized alternating-current plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

POWER-CORD PROTECTION – The AC power cord should be routed so that it is not likely to be walked on. No object should bring weight to bear on to the AC power cord.

LIGHTNING – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.

OVERLOADING – Do not overload wall outlets, extension cords, or integral convenience outlets as this can result in a risk of fire or electric shock.

OBJECT AND LIQUID ENTRY – Never use probes of any kind to reach into the product as they may touch dangerous voltage points or short parts that could result in a fire or electric shock. Never spill liquid of any kind onto the product.

SERVICING – Do not attempt to service the product yourself as opening or removing the cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

DAMAGE REQUIRING SERVICE – Immediately unplug the product from the wall outlet or other power source and refer servicing to qualified service personnel under the following conditions:

- a) When the power-cord or plug is damaged.
- b) If liquid has been spilled, or objects have fallen into the product.
- c) If the product has been exposed to rain or water.
- d) If the product does not operate normally by following the operating instructions; or exhibits a distinct change in performance.
- e) If the product has been dropped or damaged in any way.

REPLACEMENT PARTS – When replacement parts are required, be sure the service technician uses replacement parts specified by Cambridge SoundWorks, or ones which have the same characteristics as the original part. Substandard substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK – Upon completion of any service or repairs, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

DISC PRECAUTIONS:

MOISTURE OR DEW – May occur if the product is suddenly moved from a cold environment to a warm one, and prevent it from reading the disc. If this happens, turn the product on for a least one hour before inserting a disc.

DAMAGED DISCS – Never play cracked, warped, or otherwise damaged discs as they may harm the drive mechanism.

HANDLING DISCS –

- Do not touch the play side of the disc. Always handle the disc by the edges.
- Do not attach paper, tape or labels to the disc except for purpose-designed CD labels applied with an applicator intended for the purpose. Out of balance discs may damage the mechanism.
- Keep discs away from direct sunlight and excessive heat.
- Keep disc in proper storage cases when not in use.

DISC CLEANING –

- Before playback, wipe the play surface of the disc outwards from the center with a clean, soft, lint-free cloth.

STATEMENT OF COMPLIANCE – This equipment has been tested and found to comply with the limits for a Class B Digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna and the power cord.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a different circuit than the one to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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INTRODUCTION

Thanks for choosing the MegaTheater AVS500 as the heart of your home theater system. We at Cambridge SoundWorks believe that it is the ideal utilization of high technology to simplify the home entertainment experience.

The AVS500 will entertain you for many years with its flawless DVD playback, sensitive AM and FM radio reception, and playback of normal CD, CD+G, HDCD and compressed music files on DVD-R, CD-R, or CD-RW discs. It will also play back VCD and SVCD discs you burn on your PC from video files such as home movies from your digital camcorder. In addition, the AVS500 will display your JPEG digital still photos from CD on your TV screen. You can even produce a slide show with musical background by saving your photos and background music MP3 file on the same disc.

The AVS500 includes all the inputs and outputs necessary for the most common home theater system needs. There are two sets of rear panel A/V inputs and outputs which can be used to connect a VCR and a satellite receiver or cable box. A third front panel input and output can be used for quick connection of a camcorder video game, or portable music player. An optical digital input is also provided to connect the Dolby Digital 5.1 signal from a cable TV set top box or a satellite receiver equipped with an optical digital output. The built-in Dolby Digital and DTS 5.1 surround decoders will accurately play back any contemporary DVD when connected to a suitably powered loud-speaker system or multichannel power amplifier. Because of its stereo and Virtual Surround modes, the AVS500 can also be used with a stereo TV or with powered 2.0 or 2.1 speaker systems.

Finally, the AVS500 is compatible with High Definition TV monitors thanks to its advanced progressive scan circuitry. This unique circuit analyzes the characteristics of the source material on DVD and automatically

selects the proper de-interlacing algorithm for fast motion or still scenes, as well as 3:2 pulldown to convert the 24 frame per second rate of film sources to video's 60 frames per second. The result is the clearest, sharpest picture – totally free of motion artifacts or the visual stutter sometimes seen when movies, or movie segments originally shot on film, are converted to video.

If You Are New To Digital Discs

DVDs are divided into one or more sections called "Titles." Each title has a numerical label displayed on the front panel Vacuum Fluorescent Display (VFD). You can select the different titles using the title key on the remote control, or by using the Playback Control (PBC) function. The ability to bypass titles on a particular DVD is controlled by the maker of the specific DVD, and may not be available on all DVDs.

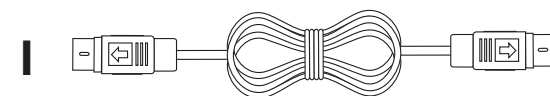
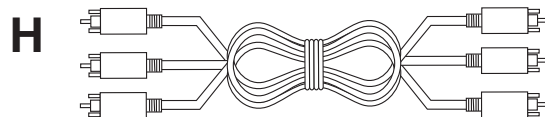
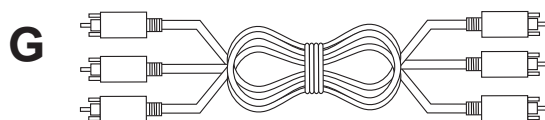
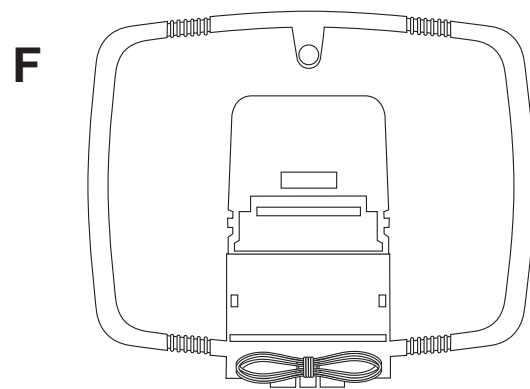
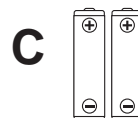
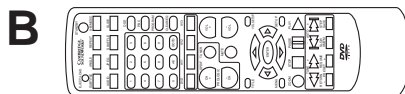
Each title is divided further into "Chapters." You may navigate chapters using the skip keys (|<<, >>|), directly using the numerical keypad, or within the DVD's on-screen menu.

CD and VCD discs are divided in tracks. You may select them using the skip keys or the numeric keypad. MP3 and Picture CDs are organized in files contained within folders. Use the on-screen "Smart Nav" function to select the files you wish to play.

The selection of many features of DVD playback is automated by "flags" in the digital bitstream that let the disc producer tell your player the optimum playback mode. The AVS500 will respond to these flags where appropriate and automatically select the proper soundtrack or technique for producing a progressive scan picture on high definition TV sets.

CARTON CONTENTS

- A) One AVS500 main control unit.
- B) Remote control
- C) Two AAA Batteries
- D) FM Antenna
- E) FM antenna to F-connector adapter cable.
- F) AM Loop antenna
- G) AV cable with three RCA plugs (red, white, yellow) on each end.
- H) Component video cable with three RCA plugs (red, green and blue) on each end.
- I) S-Video cable



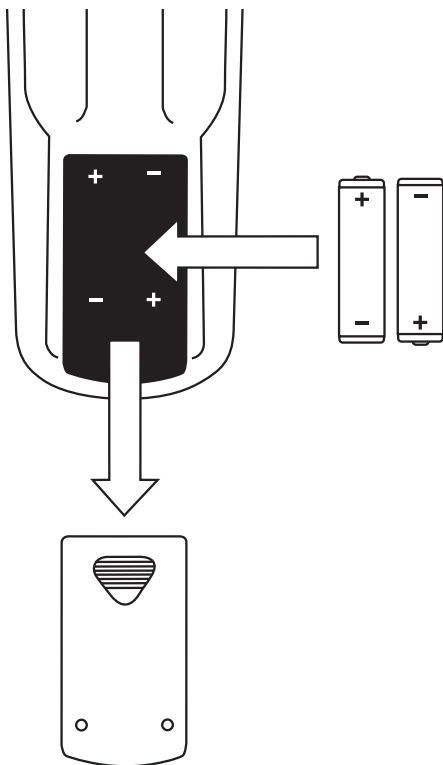
REMOTE CONTROL

Installing The Remote Control Batteries

Open the lid of battery chamber under the remote control, and install the two AAA batteries (included).

Observe and follow the polarity marks. Replace the lid.

When the batteries become weak, replace them immediately. Old batteries may leak highly corrosive fluid and permanently damage the remote control.



Button Locations and Functions

Most operation of the AVS500 is done using the remote control. Basic controls are provided on the front panel for emergency use in the event of battery failure or a lost remote.

1. **STANDBY:** Use this to turn the AVS500 on and off for normal use. (The front panel power switch should normally be left on.)
2. **REPEAT:** Repeats a chapter or title on DVD, and disc or track on CD.

3. **A-B / MUSIC:** Repeats a user-defined section of a DVD, CD or MP3 file. Press the button once at the start of the section you wish to repeat, press it again at the end of the selection. Press the button again to cancel A-B repeat. In Slide Show mode, this key is used to select the background music file if desired.
4. **SHUFFLE:** Selects CD and MP3 music tracks in random order.
5. **SLIDE:** Selects slideshow mode, which will play a selection of JPEG photos on CD in sequence.
6. **OSD:** When playing a DVD, press once to show an On-Screen Display of the current title and chapter. Press again to display the remaining time. Press a third time to display chapter elapsed time. Press a fourth time to display chapter remaining time. A fifth press will turn the On Screen Display off.

For all CD, VCD, SVCD discs, press once for single track elapsed time. Press again for single track remaining time. Press a third time for total elapsed time. The fourth press displays total remaining time, and the fifth press turns the OSD off.

For MP3 discs, one press displays file elapsed time, the second press turns the OSD off.

7. **PBC:** This key toggles the Playback Control state. Normal default operation is PBC ON.
 - With PBC on, disc play uses the DVD menu, and conventional On-screen navigation controls.
 - With PBC off, you see an information display showing the contents of the disk. It includes the number of titles, tracks, total time, audio streams, and sub-picture streams. It also shows the encoding standard, video format, and languages and sound options.

You have direct access to titles and tracks of the disc. Use the number keys to select the desired title (DVD) or track, (VCD, CD).

8. **PROGRAM:** When in PBC OFF mode with the disc stopped, you may program a playing sequence.

9. **CLEAR/EQ:** Clears the last entry while programming. Selects Graphic Equalizer mode at all other times. See the Advanced Operation section for equalizer operation.

10. **INPUT SELECTOR:** Press the button corresponding to the desired input source. Use the DVD button to select any disc inside the AVS500 (DVD, VCD, CD, CD-ROM with JPEG or MP3 files).

11. **VOLUME:** Press to adjust volume level from 00 (Minimum) to 32 (Maximum). The level is displayed on the OSD and on the front panel.

12. **MUTE:** Press to toggle between muted and non-muted state.

13. **VOL SETUP:** Press to enter the Volume Setup menu. You may adjust each individual channel volume level while listening. You may also adjust bass and treble from this menu. Press this button again to exit the menu.

14. **CURSER CONTROL:** Press these buttons to navigate through menus. Use the ENTER key to make your selection.

15. **SETUP:** Use to enter the AVS500 main setup menus. Disc play will stop when selected. Press the button again to exit the menu when you are done.

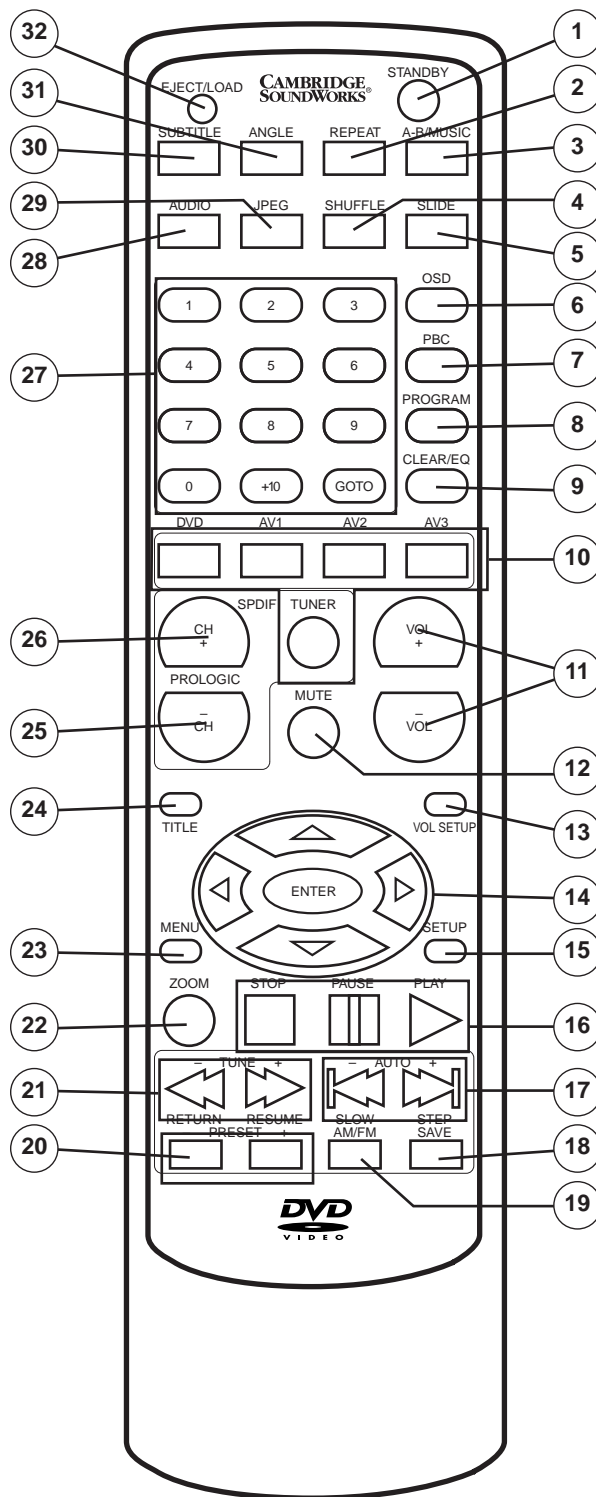
16. **TRANSPORT CONTROLS:** Use to start, stop, or pause disc playback.

- For DVD press the STOP key once, the unit enters "memory stop." Play resumes from the same point when PLAY is pressed. Press STOP a second time to resume from the disc's beginning with the next press of PLAY.

17. **[<< and >>] / - AUTO +:**

- Disc play – Selects PREVIOUS or NEXT track or Chapter.
- Tuner – Auto tunes to the next lower or higher station.

18. **STEP/SAVE:** Each press advances one frame in DVD mode. Press to save a tuned radio station into the currently selected preset location.



19.SLOW/AM/FM:

- DVD, VCD, SVCD – Press to engage in slow motion playback. The first press is 2x Slow (i.e. 1/2 normal speed), the second press is 4x, third press is 6x, and the fourth press is 8x. A fifth press returns to normal speed.
- Tuner – Toggles between AM and FM band.

20.PRESET +, PRESET -: Use these keys to select a specific preset location for a radio station.

21.<< and >> / - TUNE +:

- Disc play – Each press selects 2x, 4x, 6x, 8x fast play mode. The fifth press returns to normal speed.
- Tuner – Manually tune.

22.ZOOM: Each successive press zooms the image 1.5x, 2x, and 3x. Press again to revert to normal size.

23.MENU: Press to select the disc menu for the current title. This may vary depending on how the particular disc is mastered. If there is no menu level, this button will select the current title.

24.TITLE: The unit will return to the disc title page. You may navigate and make your selection using the CURSOR, ENTER and PLAY keys.

25.CH - / PRO LOGIC:

- Tuner mode: Selects next lower station preset.
- Auxiliary A/V input mode: Toggles between STEREO and PROLOGIC for analog sources, and for music playback from CD or MP3. *Note: When using an external digital source, surround modes are automatically selected as with DVD playback.*

26.CH + / SPDIF:

- Tuner mode: Selects the next higher station preset.
- Auxiliary A/V input mode: Toggles between Analog and Digital (SPDIF) input for a selected input. *Note: The A/V input must be in STEREO mode.*

27.NUMBER KEYS: Use for direct access to chapters, titles, and tracks (not all discs allow direct access). You may also start a disc from a particular title and chapter, or at a particular time.

- To skip to a track or chapter while playing a disc press GOTO, then select the track or chapter number desired (use +10 key for tracks above 9), then press ENTER.
- To start playing a specific title at a specific chapter, press GOTO, then use the < > keys to highlight the title. Enter the desired title number using the number keys. Use the < > keys to highlight the desired chapter and enter this using the number keys. Press ENTER and the disc will begin playing from the point you selected.
- To start playing a disc from a specific time, press GOTO twice. Use the < > keys to highlight Title and select a title number using the number keys. Use the < > keys to highlight Time and enter it using the number keys. You must enter a 0 first for hours less than 10. Press ENTER and play will begin from your selected time.

28.AUDIO: This button selects one of the audio streams available on a DVD. Some DVDs only allow selection of the audio stream from the DVD menu.

29.JPEG: This button selects the mode used to transition between JPEG still pictures.

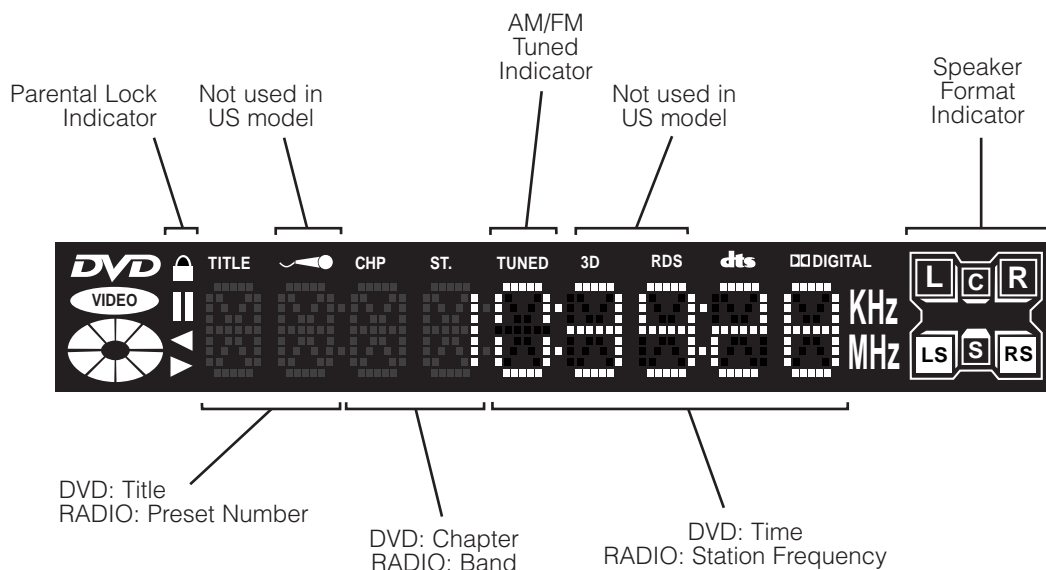
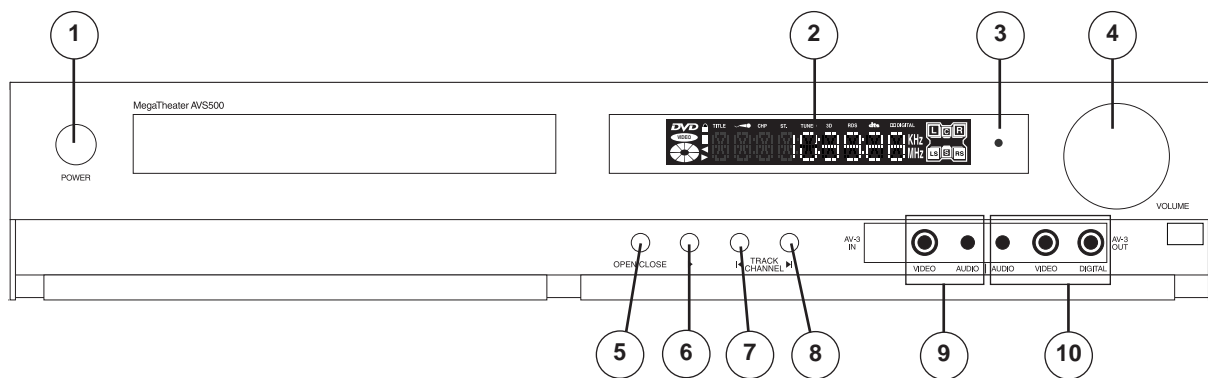
30.SUBTITLE: Selects different subtitles available on the DVD. Not all DVDs support subtitle selection from this key.

31.ANGLE: Selects different view angles. Very few DVDs support this feature.

32.EJECT/LOAD: Press to eject the disc tray, or to load the disc tray.

FRONT PANEL AND DISPLAY

1. **POWER** – Turns main AC power on and off. Leave on for normal operation, use the remote control to switch the unit to standby mode when you are not using it. It is only necessary to turn off this power switch when you are leaving the unit for extended periods, such as when you go on vacation, or for added protection during electrical storms.
2. **VFD** – Vacuum Fluorescent Display of player status.
3. **POWER LED** – Indicates the presence of AC power. This will remain lit in standby mode when the main power switch is engaged.
4. **VOLUME** – Controls volume in 32 steps.
5. **OPEN/CLOSE** – Opens and closes the disc drawer.
6. **PLAY** – Starts play of the disc.
7. **PREVIOUS TRACK/CHANNEL** – Selects previous track on a disc, or selects the next lower radio preset.
8. **NEXT TRACK/CHANNEL** – Selects the next disc track or the next higher radio preset.
9. **AV3 IN** – Composite video and stereo analog audio inputs for external AV source.
10. **AV3 OUT** – Composite audio, stereo analog audio, and Coaxial digital output.



GETTING STARTED

There are two stages to an efficient setup and installation of the MegaTheater system.

Stage 1 is the placement and connection of all the components. We have made this as easy as possible by color coding all of the critical connections.

Stage 2 is set-up and adjustment, where you tell the AVS500 what type of TV set you have, and fine tune the speakers according to their type and placement. You may also set up parental controls and adjust tone or equalization preferences at this time.

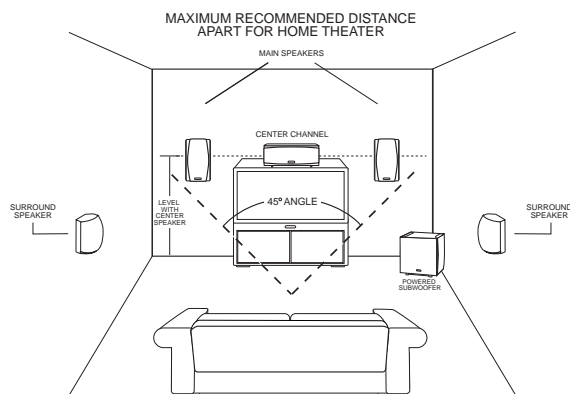
Arranging the Components:

The arrangement of the speakers within the room significantly influences their performance. Here are a few guidelines to help you get the most from your system.

- The TV monitor is the focal point of any home theater system. The front left and right speakers should be placed symmetrically a few feet to either side of the TV. These speakers should be no farther apart than the distance of the listener to the speakers.
- The center channel speaker should be placed directly above or below the TV, and ideally at the same distance from the listener as the left and right speakers. Placing the front left, front right, and center speakers at the same height is preferred.
- The surround speakers should be placed on the side walls, slightly to the rear of the listening position. Ideally they should face each other and be at a level about 2-3 feet higher than the listeners' ears. If that is not possible, they may be placed on the rear wall facing forward.
- The subwoofer is best placed in the front half of the room, near the plane of the front speakers. Placing the subwoofer in a corner will provide the most efficient coupling of the subwoofer's energy to the

room. Positioning the subwoofer away from the walls will reduce its output. Room acoustics play a major role in the propagation of bass notes, so it is advisable to experiment with a variety of placement options and stick with the one that gives the strongest bass with the most even response throughout the room.

- The remote control needs a clear line of sight to the AVS500's front panel.



SYSTEM CONNECTION DIAGRAMS

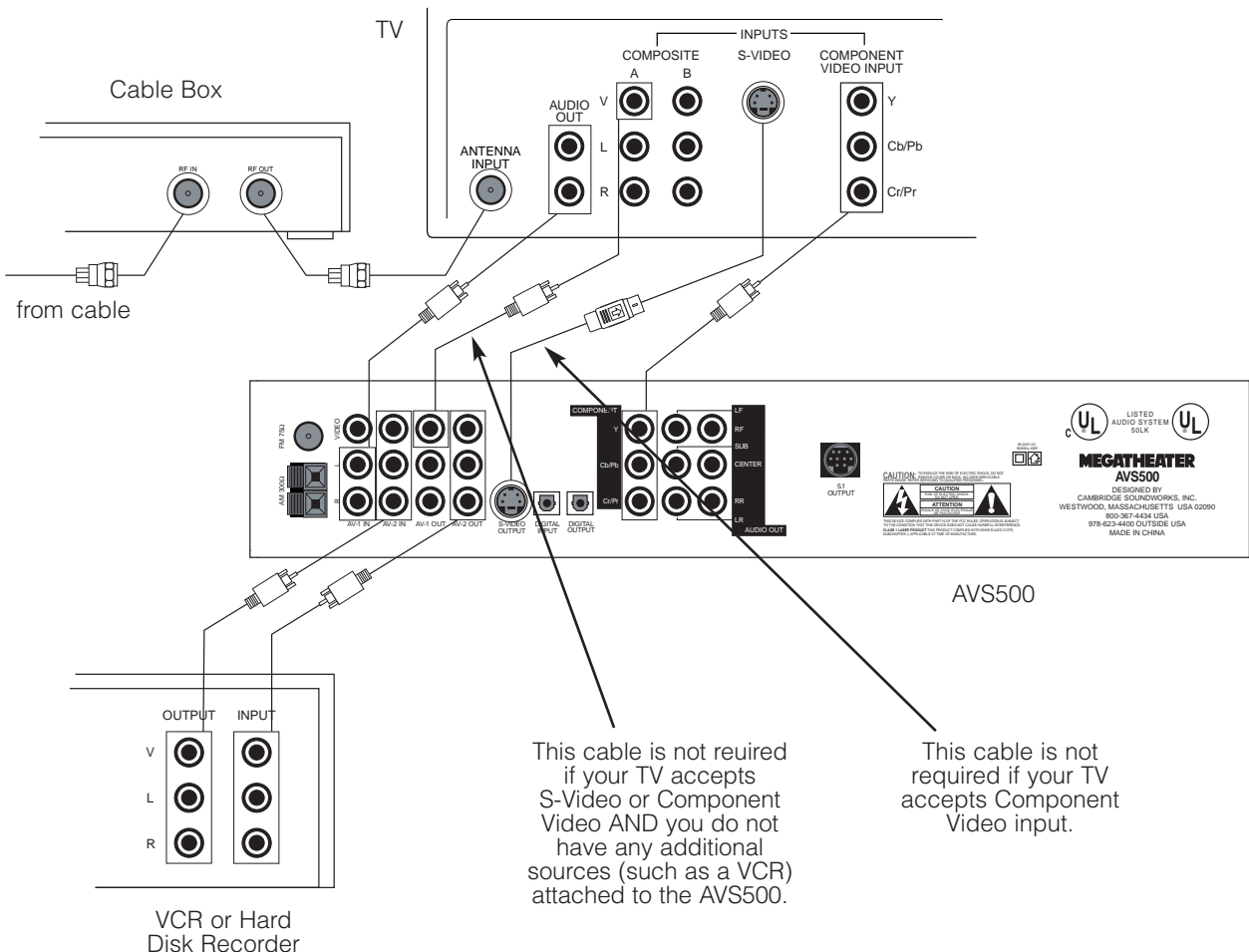
Determining Your System Setup:

There are a variety of system configurations you can select, depending on the other equipment you wish to connect to your MegaTheater system.

Option A: The simplest system consists of the MegaTheater and a TV set. A cable box or satellite receiver connects directly to your TV in this setup. Connect the video output from the MegaTheater to your TV to watch DVD movies. Connect the TV sound output to an auxilliary A/V input of the AVS500. Select this same auxilliary A/V input to listen to your off-air, cable, or satellite programs in Stereo, Virtual Surround Sound, or Dolby Pro Logic Surround using the AVS500 processor and speaker system.

Use this diagram if:

- You do not have a cable box or satellite receiver and use your TV tuner to select channels.
- You have a basic cable box connected to your TV by the antenna connection (You tune your TV to channel 3 or 4 to view cable channels).

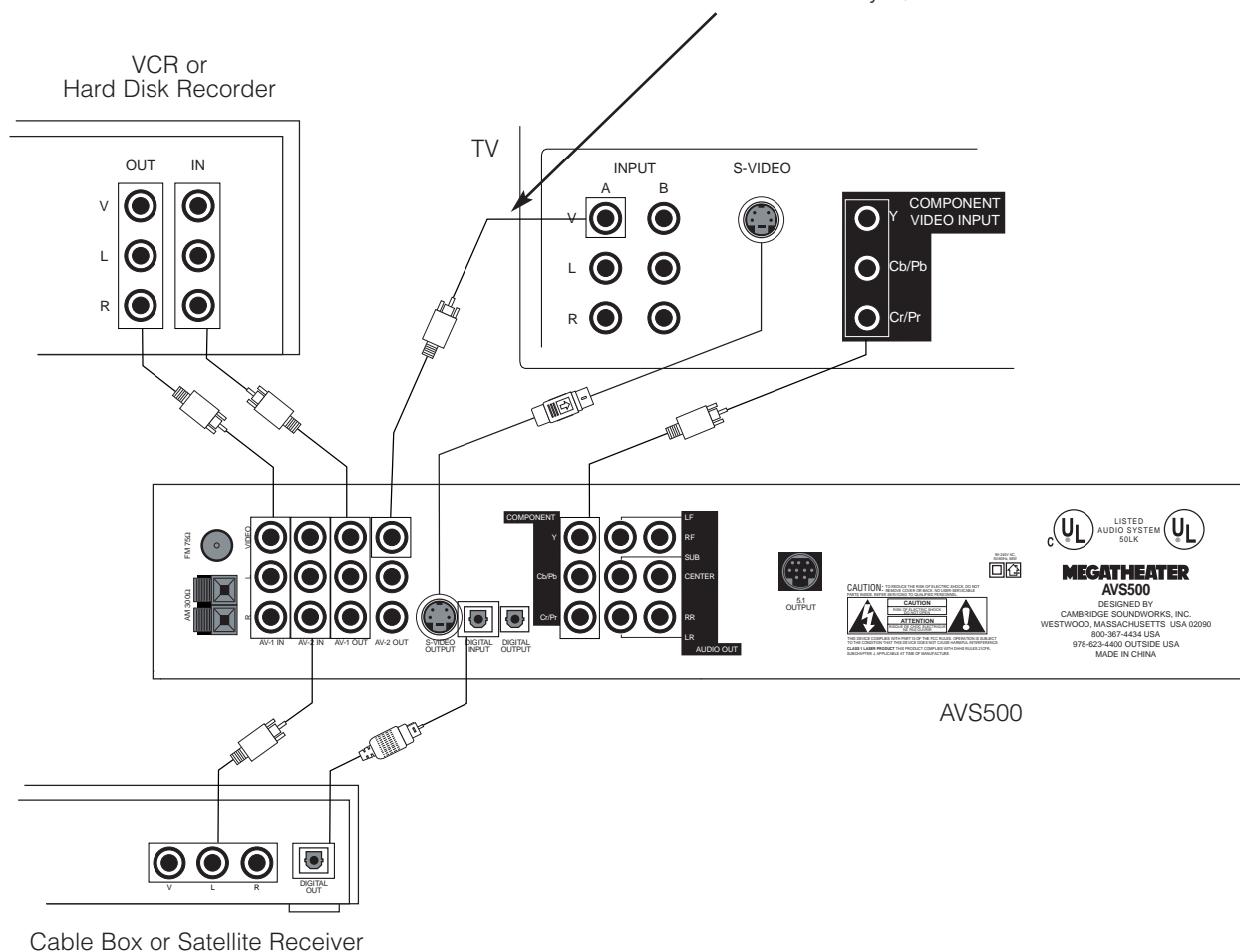


Option B: This option is the best choice if you have a video source with an optical digital output that offers Dolby Digital programming (Digital Set Top Box (STB) for cable, digital Satellite, or an HDTV tuner). The Digital output of the STB connects directly to the AVS500. The AVS500 processor decodes the Dolby Digital signal from your STB when present, and plays the sound in Stereo, Virtual Surround Sound, or Dolby Pro Logic otherwise. The Video output of the STB may be connected either to the AVS500 or directly to the TV, whichever you prefer. An HDTV tuner STB must be connected directly to the TV to get High Definition video. *Note: Before making any connections, turn off the power to all system components. Only turn the power back on after all connections are made.*

Use this diagram if:

- A. You have a cable box or satellite receiver with digital or stereo output.
- B. You have a VCR and wish to record or play in Stereo or Pro Logic mode.

Composite Video cable is required if you have auxiliary A/V sources. It is not required for S-Video or Component Video-capable TV sets if no auxiliary A/V sources are used.



Connecting the Video Output of the AVS500 To Your TV:

The video output connection you need is determined by the capability of your TV.

If you have a newer TV with progressive scan (Y/Pb/Pr) or interlaced (Y/Cb/Cr) component video inputs, use them for the best picture from DVD playback.

High Definition (HD) and Enhanced Definition (ED) TV's should be compatible with the progressive scan output. Standard Definition TV's are not.

Note: The component video output of the AVS500 is set to INTERLACED at the factory. To benefit from a progressive scan TV, you must change the output mode to PROGRESSIVE in the Setup menu of the AVS500.

If you do not have component video inputs on your TV, S-Video is the next best choice. Most current TVs have at least one S-Video input.

Connect one end of the supplied S-Video cable to the jack on the AVS500, and the other end to the TV's S-Video input.

The most common video input type on a TV is Composite video, also known as CVBS. This input uses a standard RCA jack, usually color-coded yellow.

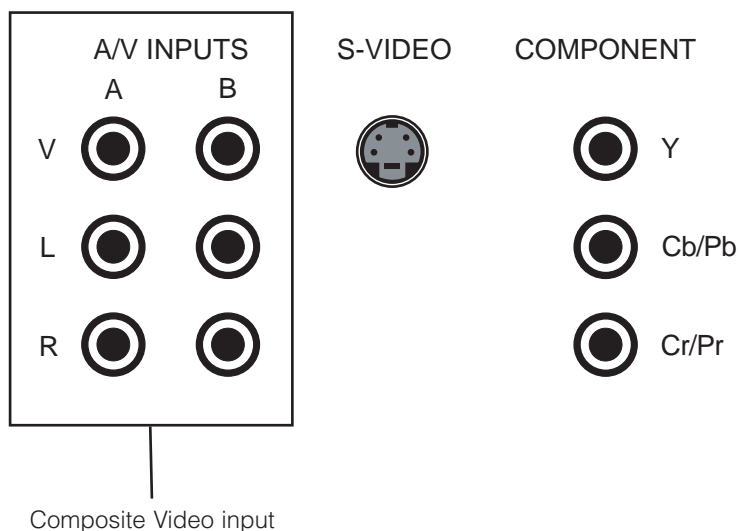
The AVS500 has two composite video output jacks on the rear panel, labeled AV1 and AV2. Either one may be used. The second output is provided to connect to the input of a VCR or other device. *Note: The AVS500's Component and/or S-Video output functions only during DVD playback. You must also connect the AVS500's Composite output to your TV set. It supplies the signal from an auxiliary A/V source, such as a VCR or cable box connected to an A/V input of the AVS500. Select a composite video input on your TV to view the auxiliary A/V source.*

The AVS500 provides output to either it's Composite Video or S-Video outputs.

If you do not have any additional A/V sources connected to the AVS500, and you are using the Component or S-Video outputs, you do not need to connect anything to the Composite outputs of the AVS500.

Note: Progressive Scan mode does not apply to S-Video or Composite video outputs.

Example of TV set A/V input panel. Exact layout and features will vary by model.



Connecting Auxiliary A/V Sources:

There are three auxiliary A/V connections available on the AVS500 (AV1, AV2, and AV3). These are all electrically identical, and may be used interchangeably. Each connection has stereo audio and Composite video inputs and outputs. AV1 and AV2 are located on the rear panel and may be used to connect a VCR, Cable Box or similar device. AV3 is behind the door on the front panel to provide convenient temporary connection of a camcorder or portable music recorder/player.

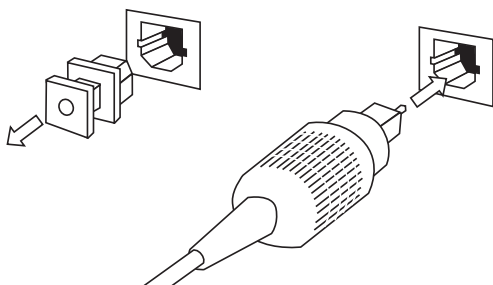
You must connect the AVS500 Composite Video output to your TV's Composite Video input to view video feed to any of the three A/V inputs.

Connecting an Auxiliary A/V Source with Digital Output:

Many digital cable systems and almost all Digital Satellite receivers offer digital audio outputs. This provides access to the Dolby Digital (AC3) signal from movies and high definition TV broadcasts. You may also connect any audio source or PC sound card which provides a standard SPDIF (Sony Philips Digital Interface) signal with up to 24 bit/96Khz resolution. Connect a standard TOSLINK optical cable to the Digital input as shown in the diagram.

The AVS500 will decode Dolby Digital, DTS, Dolby Pro Logic or Stereo from the digital signal as selected in the Audio Setup menu. This digital input may be associated with the video signal from AV1, AV2 or AV3 by pressing the "SPDIF" key on the remote after the desired A/V input is selected.

Note: The A/V input must be in STEREO mode to allow SPDIF selection.



Audio Output Connections:

5.1 Surround System

The main audio outputs of the AVS500 are next to the Component video outputs. These outputs are color coded to match the cables supplied with the BassCube 851. Connect these outputs to the BassCube 851 or to another 5.1 amplifier/speaker system.

Stereo System

Use only the Red and White output jacks to connect the AVS500 to a conventional 2-channel stereo system, or powered system such as the BassCube 821. You will need to select an appropriate Downmix mode, as explained on page 32, for stereo operation.

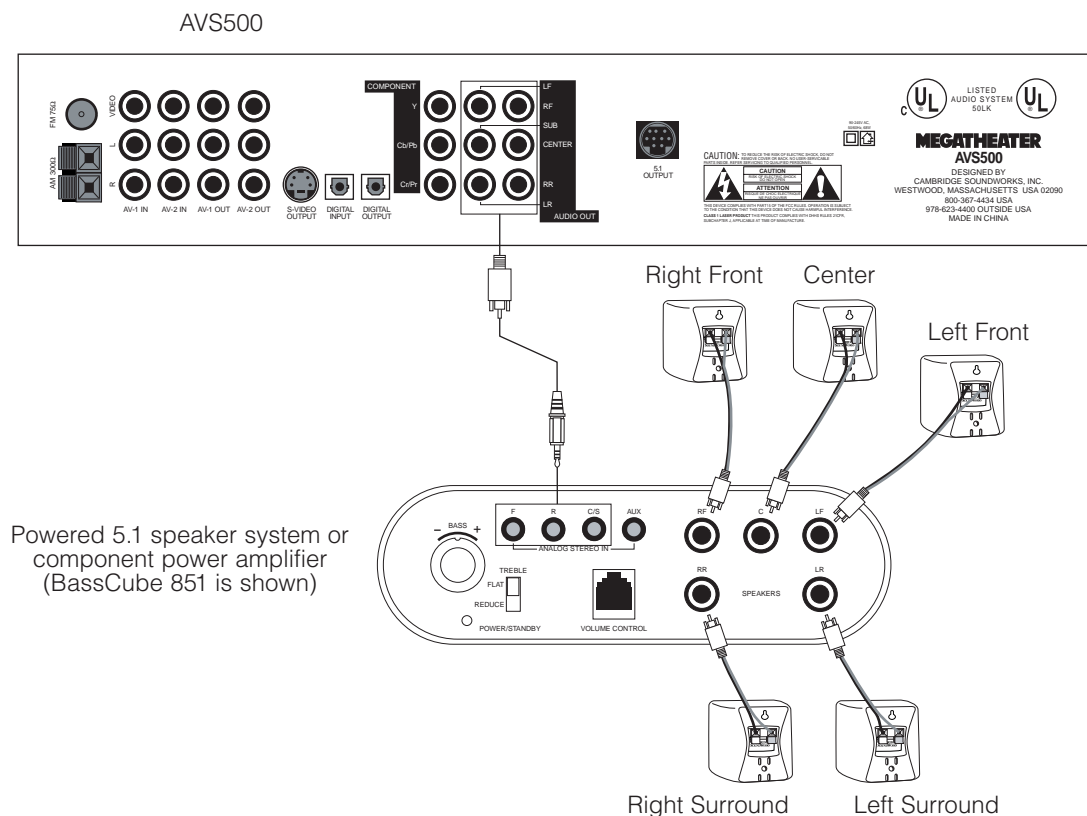
Digital Output

Two digital outputs are provided on the AVS500. You may use the rear panel TOSLINK optical output to send the DVD, CD, MP3 or SPDIF input signal to an outboard processor. A coaxial digital output is also provided on the front panel for temporary connection to a portable digital recording source such as a minidisc or DAT recorder. Analog sources, such as the AM/FM tuner output, are not available from the digital outputs.

A/V Outputs

A/V outputs are provided for connection of a VCR or other recording device. They carry the signal from the Front Left and Front Right speaker system, but are not controlled by the main volume.

Note: If you wish to make a recording from a DVD or other multi-channel source, select the DVD's STEREO audio track or choose STEREO in the DOWNMIX set-up menu.



BASIC SETUP MENU

To get the most from your MegaTheater system, make sure the settings are configured for your TV and speaker types. Confirmation is made through the Setup menu, accessed by pressing the remote control's SETUP button. Use the **▲ ▼ < >** buttons to navigate through the menu and highlight your selection. Use the ENTER button to make the selection. The **<** key will return you to the previous menu level. When you are all done, press the remote control SETUP button again to return to normal operation.

Note: There are additional Setup options available which select advanced features. These are discussed later under ADVANCED SETUP. You do not need to be concerned with them now.

1. Turn the main power on by depressing the POWER button at the left of the front panel. Also turn on the main power to your BassCube 851 or other amplifier system. The system display should illuminate, and the VFD should indicate NO DISC.
2. Turn on the power to your TV. Use your TV's remote to select the video input with the AVS500 connected to it. When the proper input is selected, you should see the Cambridge SoundWorks logo on the TV. If you have an HDTV or EDTV and see a double, overlapped or streaked logo screen, it means your TV is in progressive mode. Change the TV monitor mode to INTERLACED for now so you can read the menus more easily.

Select TV Output Mode

The output mode of the AVS500 must match the input mode of your TV set. The AVS500 arrives set up for Composite (CVBS) output and Component (YCRCB) output. If you are using either one of these inputs on your TV, you should not need to adjust the AVS500's video output. If you are using your TV's S-Video input, you should change the output mode of the AVS500 to S-Video for the best picture quality.

1. Press the EJECT/LOAD button to open the drawer.

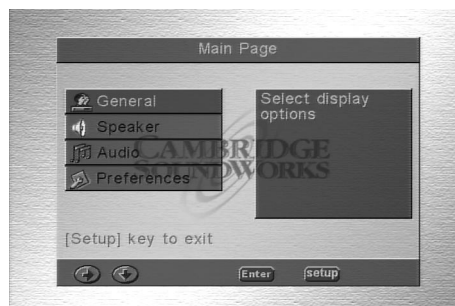
2. With the drawer open, press the A-B/MUSIC button to toggle between CVBS+YCRCB and S-VIDEO+YCRCB output settings. The current setting is shown on the front panel VFD display and also on the on-screen display.
3. Press the EJECT/LOAD button again to close the drawer.

Note: The TV MODE must be set to INTERLACED to change S-Video and CVBS modes.

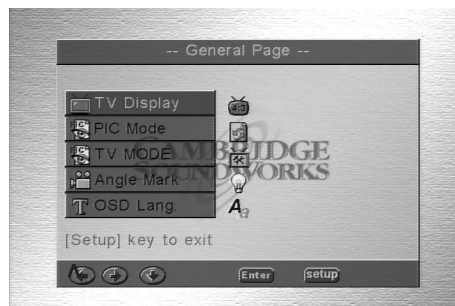
Select TV Aspect Ratio

The AVS500 needs to know what the aspect ratio of your TV is so that the picture will fill the TV screen as accurately as possible. Conventional TVs have an aspect ratio of 4:3 (4 units wide, 3 units high). The newer widescreen TVs have a 16:9 aspect ratio. If this setting does not match your set, the picture will look stretched or squashed.

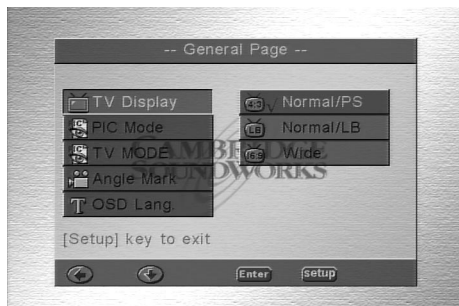
1. Press the SETUP button on the remote. You will see the following screen:



2. Use the **▲ ▼** keys to highlight GENERAL, and press ENTER.



3. Highlight TV DISPLAY and Press ENTER. Press ENTER again and use the **▲ ▼** keys to choose your TV aspect ratio.



If you have a widescreen TV (16:9 Aspect Ratio) select WIDE. If you have a conventional 4:3 TV select either of the NORMAL options.

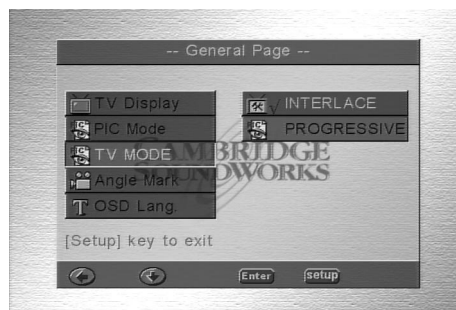
- In wide mode 16:9 movies will fill the screen, 4:3 movies will have blank bars at the sides but fill the screen vertically. Other widescreen aspect ratios may have thin bars at the top and bottom to fit the full frame onto your screen. *Note: Some 16:9 TVs will automatically stretch 4:3 source material to fill the screen resulting in distorted geometry on 4:3 material. This is not a function of the AVS500, and is controlled by your TV.*
- If you have a conventional 4:3 TV select either of the NORMAL options. NORMAL/PS (Pan and Scan) will chop the sides off of a widescreen movie in order to fill the screen vertically. NORMAL/LB (Letterbox) will place black bars at the top and bottom of widescreen movies in order to fit the full picture on your screen.

Press ENTER to lock your selection, then press **<** to return to the previous menu level.

Select Progressive Scan TV Mode (if applicable)

If you have an interlaced TV, or you are using S-Video or composite video connections, skip this step. The AVS500 comes shipped in INTERLACE mode.

1. Use the **▲ ▼** keys to highlight TV MODE. Press ENTER.

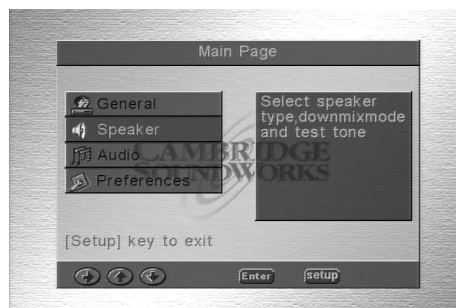


2. Select PROGRESSIVE if you have a High Definition or Enhanced Definition TV and are using a Component video connection. Press ENTER to lock your selection. Use the **<** button to return to the MAIN PAGE.

Select Speaker System Type

You may skip this step if you are using a Cambridge SoundWorks 5.1 MegaTheater system package with a new AVS500. The AVS500 arrives pre-configured correctly. If you are not using a system powered by a Cambridge SoundWorks BassCube 851 or equivalent, you may need to change some settings. Refer to your speaker or amplifier documentation to determine the proper settings for that system.

To make changes to your speaker configuration, select SPEAKER from the Main Page.



- If you are using a 2-channel, or 2.1 system, select DOWNMIX, and choose the STEREO or VSS settings to your preference. VSS is a Virtual Surround Sound processor which simulates a surround sound effect from two main speakers.
- If you are not using a BassCube 851 or equivalent that provides its own Bass Management, select SUB WOOFER and ON.
- If you do not have a center channel speaker, select CENTER and OFF.
- If your center speaker is closer to you than your main (left and right) speakers, select CENTER DISTANCE and select the closest measurement that equates to how much closer the center speaker is than the main ones.
- If your surround speakers are much closer to the listening position than your main speakers, choose REAR DISTANCE then select the closest dimension to the average difference between the listening position and the surround speakers. For example, if your rear speakers are 6 ft from the listening position and the front speakers are 9 ft, choose 3 ft as your rear distance setting.

Balance Channel Levels

For precise surround imaging, all 5 speakers in a 5.1 system should play at equal volume levels. Even if all 5 high-range speakers are identical, some may be further away from the listening position than others, or be influenced by their surroundings. This difference will alter the level you hear from each speaker at the listening position. The AVS500 features a test tone to help calibrate the levels. You can adjust channel balance by ear, or you may use an inexpensive SPL meter such as Radio Shack #330-2050 for more precise adjustment.

1. Select TEST TONE, then select ON. A short burst of pink noise will be sent to each channel in turn. Increase the volume enough to hear the tone clearly. Determine if all channels play at an equal volume when you are seated in the primary listening position. Make a note of which channels may need to be increased or decreased. Avoid changing the main L and R channel signals.

2. The Number keys on the remote correspond to the pictures on the speaker diagram shown on the screen.

1 – Left Front

2 – Center

3 – Right Front

4 – Subwoofer

7 – Left surround

9 – Right Surround.

Select the number of the speaker that requires adjustment, and use the VOL+ and VOL – keys to adjust the volume to the same level as the L and R main speakers. The VFD will show the adjustment level for the channel. The channel being adjusted will hold for 5-seconds to give you time to decide if further adjustment is necessary. After 5 seconds, you may choose another channel and repeat the process.

You are now finished with the Basic Setup. Press the SETUP button to exit and return to normal operation.

OPERATION AND USE

Playing DVD, VCD, SVCD, CD, JPEG Photo Disc or MP3 Music Files:

Press the DVD key on the remote control.

1. Press EJECT/LOAD on either the remote or the front panel to open and close the drawer.
2. Insert the disc and press EJECT/LOAD again to close the drawer. The AVS500 will auto identify the disc and load it.
 - If the Disc is a DVD the unit will play the MENU or TITLE of the disc.
 - If the disc is VCD or SVCD the unit will play in PBC ON state.
 - If the disc is a music CD the unit will play sequentially from track 1.
 - If the disc contains MP3 or JPEG files, the SMART-NAV menu, which shows the disc folder and file structure, will be shown if selected. A single level file list will be displayed if NO MENU is selected in the PREFERENCES menu.
3. Use the PLAY, PAUSE, STOP, <<, >>, |<<, and >>| keys to control transport motion or to navigate MP3 or JPEG files when SMART NAV is set to NO MENU.
4. Use the ▲, ▼, <, >, and ENTER keys to navigate DVD or VCD menus and MP3 or JPEG files and folders when SMART NAV is set to WITH MENU.

Playing The Radio:

Press the TUNER key on the remote. Use the AM/FM key to select the band.

1. Use the CH+ and CH- keys to select a previously saved preset station.
2. Use the << and >> keys to manually tune a desired station.
3. Use the |<< and >>| keys to seek the next or previous strong station.

4. To save a station preset: Tune in the desired station. The lowest numbered empty preset number will flash on the front panel display for 5 seconds. While the preset number is flashing, press SAVE to memorize this preset. If you wish to save the station in another numbered location, use the PRESET - and + keys to choose the preset number you wish to use, then press the SAVE key.

For convenience, we recommend using the 20 AM, 20 FM preset memory of the AVS500 to save all of your favorite stations as presets. This will greatly simplify normal day to day operation.

Playing An Auxiliary A/V Source:

Press the AV1, AV2 or AV3 key on the remote.

1. To play a source with digital audio, first select video using the AV1, AV2, or AV3 keys. Then press the SPDIF (CH+) key. When you return to this source again, the AVS500 will remember that this input is a digital source.
2. Digital audio sources will automatically select Dolby Digital, DTS, Pro Logic, or Stereo, according to the setting in the General Setup menu.
3. Analog sources may be played with Dolby Pro Logic surround processing by pressing the PRO LOGIC key. Pressing the PRO LOGIC key again returns the unit to Stereo operation.

Note: If you are using Component or S-Video inputs on your TV for DVD playback, you must select a composite video input on your TV to view a composite video source connected to AV1, AV2, or AV3.

Viewing Or Playing Files:

You may play back MP3 encoded music files, and view JPEG encoded picture files that have been recorded to a CD. You may include both file types on the same CD.

JPEG files may be viewed individually, or may be combined into a slide show with automatic transitions. You may also use an MP3 file to provide a musical background for your slide show.

Navigation and playback of files depends on the SMART NAV setting in the Preferences page of the Setup menus.

Playing MP3 Files:

Press the DVD key on the remote to select the input, and load your MP3 encoded CD.

NO MENU: When SMART NAV in Preferences page is set as NO MENU, a list of all the tracks on the disc will be displayed.



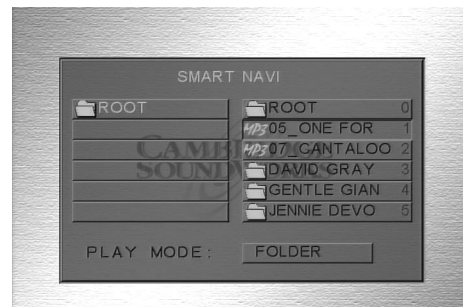
1. Use the number buttons or the **|<< and >>|** buttons to select tracks.
2. Once play has begun, the **<<, >>, |<<, >>|**, STOP and PAUSE controls function exactly as they do for CD or DVD playback. The Track number will be displayed on the VFD, followed by track elapsed time.

Tip: If you have a disc containing JPEG files and MP3 files, both may be intermixed for playback. The last viewed JPEG will remain on the screen during music file playback. You may use this feature to provide "wallpaper,"

such as album cover art, during music playback.

The desired JPEG file must be placed first, immediately followed by the musical tracks. You may place other JPEG files throughout the program if you wish to periodically change the wallpaper between musical tracks.

WITH MENU: When SMART NAV in Preferences page is set as WITH MENU, the menu will display the folders and files in the hierarchy that they have been saved on the disc.



1. Use the **<, >, ^, and v** keys, or the number keys to navigate through the menus. The **<** and **>** keys move between the two menu levels displayed, and the Play Mode selection field. The **^** and **v** control movement within each column or change the PLAY MODE selection. Once you have selected a file to begin playback, press ENTER or PLAY to begin.
2. Once play has begun, the **<<, >>, |<<, >>|**, STOP and PAUSE controls function exactly as they do for CD or DVD playback.
3. To select a different folder or PLAY MODE, first STOP playback.

PLAY MODE: You may change the PLAY MODE by highlighting the PLAY MODE box and pressing **^** or **v** to select the desired mode.

Viewing JPEG Files:

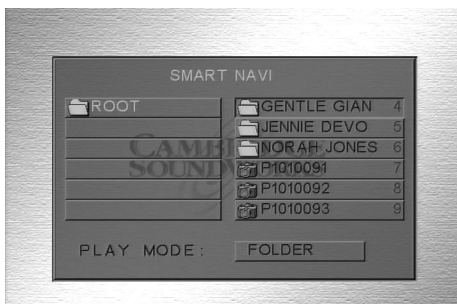
Press the DVD key on the remote to select the input, and load your JPEG Photo CD. Navigation and playback of files depends on the SMART NAV setting in the Preferences page of the setup menus.

NO MENU: When SMART NAV in Preferences page is set as NO MENU, the directory and play mode will not be displayed. A camera icon identifies JPEG files.



1. Use the number buttons or the **|<< and >>|** buttons to select the first photo you wish to view. Press PLAY or ENTER to begin viewing. The PLAY MODE setting will determine how the pictures are viewed. The file number will be displayed on the VFD. Set PLAY MODE to SINGLE to view one photo only.
2. Once play has begun, the **|<<, >>|**, STOP and PAUSE controls function exactly as they do for CD or DVD playback.
3. You may activate SHUFFLE or REPEAT functions from the remote.

WITH MENU: When SMART NAV in Preferences page is set as WITH MENU, the menu will display the folders and files in the same hierarchy that they have been saved on the disc. A camera icon identifies JPEG files.



1. Use the **<, >, ▲, and ▼** keys, or the number keys to navigate through the menus. The **<** and **>** keys move between the two menu levels displayed, and the PLAY MODE selection field. The **▲** and **▼** controls move within each column or to change the PLAY MODE selection. Once you have selected a file to begin viewing, press ENTER or PLAY to begin. The PLAY MODE setting will determine how the pictures are viewed. The file number will be displayed on the VFD. Set PLAY MODE to SINGLE to view one photo only.
2. Once play has begun, the **<<, >>, |<<, >>|**, STOP and PAUSE controls function exactly as they do for CD or DVD playback.
3. To select a different folder or PLAY MODE, first STOP playback.

Play Mode:

Play Mode settings control the order and frequency of file play or viewing for both JPEG files and MP3 music. You may change the PLAY MODE by highlighting the PLAY MODE box and pressing **▲** or **▼** to select the desired mode. Nine different play modes are supported:

SINGLE – Plays the selected file once and stops.

REP-ONE – Repeats the selected track indefinitely.

FOLDER – Plays all the files in the current folder once in sequence.

FOLDER R – Plays all the files in the current folder in sequence indefinitely.

DISC SCAN – Plays the first 10-seconds of each file on the disc once in sequence.

DISC – Plays all the files on the disc once in sequence.

DISC REP – Plays all the files on the disc in sequence indefinitely.

RANDOM – Plays all the files in the selected folder in random order, indefinitely.

SHUFFLE ON – Plays all the files in the selected folder once in random order.

Changing Transitions Between JPEG Files:

Press the JPEG button on the remote. Each press selects the next higher mode. Twelve slide show transition modes are provided:

Mode 0 – no transition (default)

Mode 1 – wipe from top

Mode 2 – wipe from bottom

Mode 3 – wipe from top and bottom to center

Mode 4 – wipe from center to top and bottom

Mode 5 – vertical blinds

Mode 6 – wipe from left to right

Mode 7 – wipe from right to left

Mode 8 – wipe from left and right to center

Mode 9 – wipe from center to left and right

Mode 10 – wipe from edge to center

Mode 11 – horizontal blinds

Mode 12 – random

JPEG Image Rotation:

There are four modes to rotate a picture that does not display correctly: Invert, Mirror, Left, and Right. These operations are allowed only when a picture is being displayed manually, and will be cancelled automatically when a new picture is displayed. The direction key is used to select the different rotation modes:

UP button ▲ : Invert/Normal

Down button ▼: Mirror/Normal

Left button ◀: Turn left

Right button ▶: Turn right

Zoom:

The AVS500 provides both zoom in/out for DVD, VCD, and SVCD and zoom with pan functions for JPEG pictures. Press the ZOOM key to select the zoom ratio options. When ZOOM mode is on, any picture will be displayed at the last ratio selected by the user. An OSD message will indicate the current ratio. If ZOOM mode is on, ◀◀ and ▶▶ buttons are used to control the ratio of zoom in/out. In zoom ratios above 100%, use the ◀, ▶, ▲, and ▼ buttons to pan to different areas of the picture. When ZOOM mode is off, each picture is scaled to fit the whole screen.

Note: during ZOOM mode, slide show transition and image transformation are disabled.

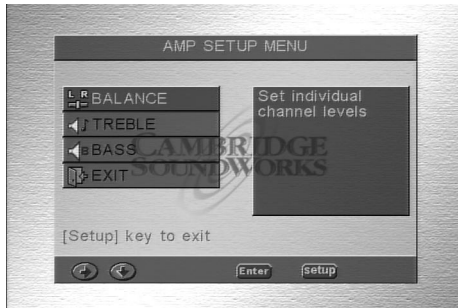
Programmed Playback:

When in PBC OFF mode with the disc stopped, you may program a playing sequence.

1. Press the PROGRAM key to enter programming mode.
2. Press the number key corresponding to the first track you wish to play. The OSD will display P01: (Track #).
3. Press the number key for the next track, the OSD will read P02: (Track #).
4. Continue until all tracks are programmed, then press PLAY or ENTER to begin programmed play.

If you make a mistake during programming, press CLEAR, which will erase the last entry.

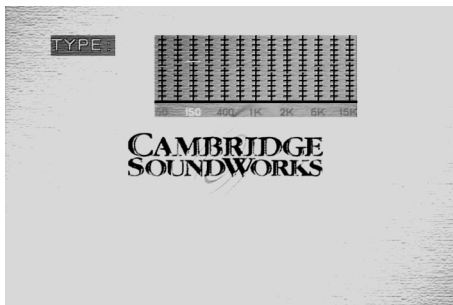
VOL Setup:



1. The Volume Setup menu lets you fine tune the channel balance, bass, and treble controls while the program is playing.
2. Press the VOL SETUP button on the remote to enter the menu.
3. Select BALANCE, BASS, or TREBLE to adjust levels. Use the **▲** and **▼** buttons to select the channel you wish to adjust, then press ENTER. Use the **▲** and **▼** buttons to adjust the level.
4. Use the **◀** button to return to the top level.
5. Press VOL SETUP again to return to normal viewing.

ADVANCED OPERATION

Graphic Equalizer:



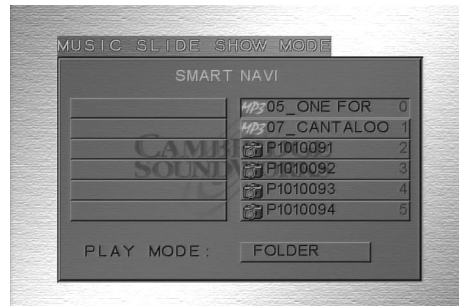
The built-in 7-band graphic equalizer lets you fine-tune the system frequency response to your room or your taste. Use the CLEAR/EQ button to turn on the graphic equalizer function.

1. Press once to turn the equalizer on and see the currently selected curve.
2. Use the PLAY button to select Standard (flat), Classic, Jazz, Rock, Pop, Ballad, or Personal mode.
3. When in personal mode, use the < and > keys to select the band, and use the ▲ and ▼ keys to adjust each band to your taste.
4. Press the EQ button again to show an on-screen spectrum level display.
5. Press again to turn the display off but keep the equalizer on.
6. Press again to turn the equalizer off.
7. When the EQ is turned on again, it will return to the last-used response curve.

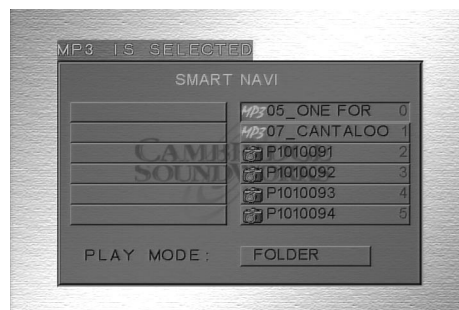
Music Slide Show:

The AVS500 lets you select a background sound track for a JPEG slide show. The sound file must be in MP3 format, and be on the same CD as the picture files.

1. Load the CD containing the files.
2. Press the SLIDE button. The OSD will display MUSIC SLIDE SHOW MODE.



3. Select the MP3 track you wish to play, then press the A-B/MUSIC button. The OSD will read MP3 IS SELECTED.



4. Select the first photo of the slide show, and press PLAY. The show will begin.

Notes:

- *PLAY MODE settings apply to the JPEG files. The PLAY MODE for the music files is SINGLE, and the slide show will end after the music file has played. Therefore when making your slide show disc, use a sufficiently long file, or combine a number of songs into a single file of adequate length.*

- When making a slide show disc, make the first file on the disc your music file for simpler startup.
- During Music Slide Show mode, image transformation, zoom, and thumbnail browsing are not allowed.
- If loading a mixed format CD for the first time after turning the power on, it may be necessary to play the music track briefly to initialize music playback before selecting the background music track in Music Slide Show mode.

BROWSING

You may browse thumbnails of the files on DVD, VCD, SVCD, and JPEG File discs.



Browsing a DVD:

Press the PBC button until PBC OFF is displayed on the OSD, and press STOP. Then press the MENU button. Nine scenes will be displayed on the screen. Use the number keys 1-9 to select a scene, or use the |<< and >>| keys to step to the previous or next nine scenes.

Press STOP to exit.

Browsing a VCD or SVCD:

Press the PBC button until PBC OFF is displayed on the OSD, and press STOP. Then press the MENU button.

Make your selection using the number keys 1-4.

1. INTRO – Plays each program full-screen for 10-seconds.
2. DISC – Browse the entire disc. Nine programs will be displayed on the screen. Use the number keys 1-9 to select, or use the |<< and >>| keys to step to the previous or next nine programs.
3. TRACK – Browse within the selected track. Nine programs will be displayed on the screen. Use the number keys 1-9 to select, or use the |<< and >>| keys to step to the previous or next nine programs.
4. EXIT – Exit this function

Browsing JPEG files:

Press the MENU button at any time within a folder.

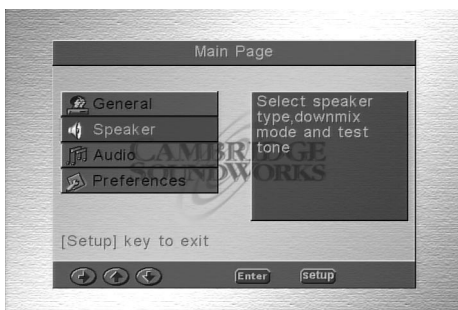
Nine photos will be displayed on the screen. Use the number keys 1-9 to select a photo, or use the |<< and >>| keys to step to the previous or next nine scenes.

Press STOP to exit.

ADVANCED SETUP

Various Setup menus provide ways that advanced users may customize the system. In most instances, you will leave these in the factory default settings.

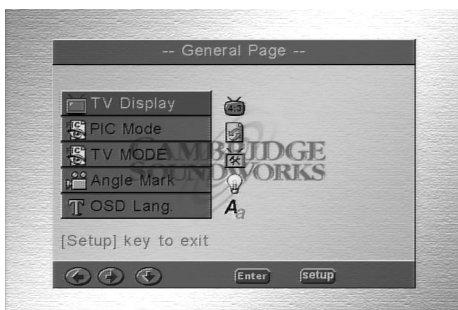
- In STOP mode, press the SETUP key to display the MAIN PAGE of the setup menus.
- Use the UP (▲) and Down (▼) buttons to move the cursor.
- Use the RIGHT (➤) or ENTER buttons to enter the sub menu.
- Use the LEFT (◀) button to return to the upper menu.
- Use the ENTER button to select the function.
- Press the SETUP button at any time to exit the Setup menu.



Note: Disc play must be stopped when changing settings on the Setup menus to prevent unexpected results.

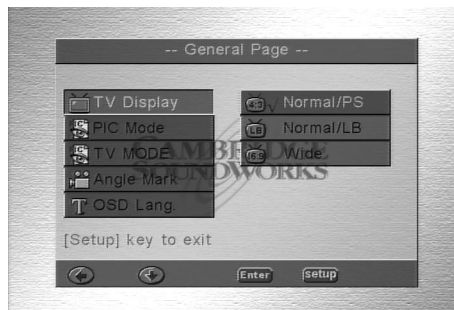
GENERAL PAGE

Select your TV type, Picture Mode (For progressive-scan TV's), TV Mode, turn angle mark on/off and select the On Screen Display language.



TV Display:

Select the aspect ratio of your TV set.



- **Normal/PS** – Pan and Scan. Use for 4:3 aspect ratio TVs. Widescreen movies will fill the screen vertically, but the sides of the picture will be cut off.
- **Normal/LB** – Letterbox. Use for 4:3 aspect ratio TVs. Widescreen movies will fill the screen from side to side, black bars will show top and bottom. This is the only way to view the entire picture of a widescreen movie on a 4:3 TV set.
- **Widescreen** – Use for 16:9 widescreen TVs. 4:3 format movies will have vertical blank bars on each side, 16:9 widescreen video will fill the screen, and 2.35:1 theatrical widescreen movies will have narrow black bars on the top and bottom of the frame.

Note: The AVS500 also responds to the aspect ratio flag on the DVD. Some DVDs may be incorrectly flagged, causing improper display even when the setting of your equipment is correct. If you find that an occasional DVD does not display correctly, it is probably the DVD, and not an incorrect setting or malfunction of the AVS500. For these few discs, you may need to select a different, technically "incorrect" aspect ratio. The proper picture geometry also depends on any related settings that may be offered on your TV.

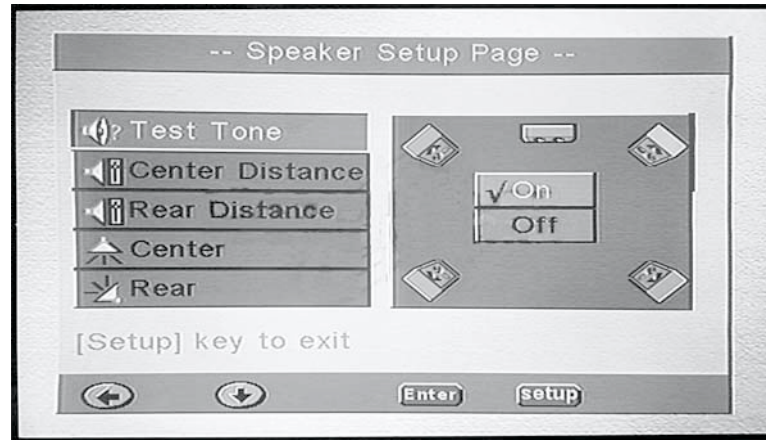
PIC Mode (Applicable to Progressive Scan TVs only):

Select the method used for de-interlacing DVD video. DVDs are recorded with interlaced frames (480i),

Do not use the procedure described on pg. 31 of the Owner's manual to adjust individual speaker output levels. Use the following procedure:

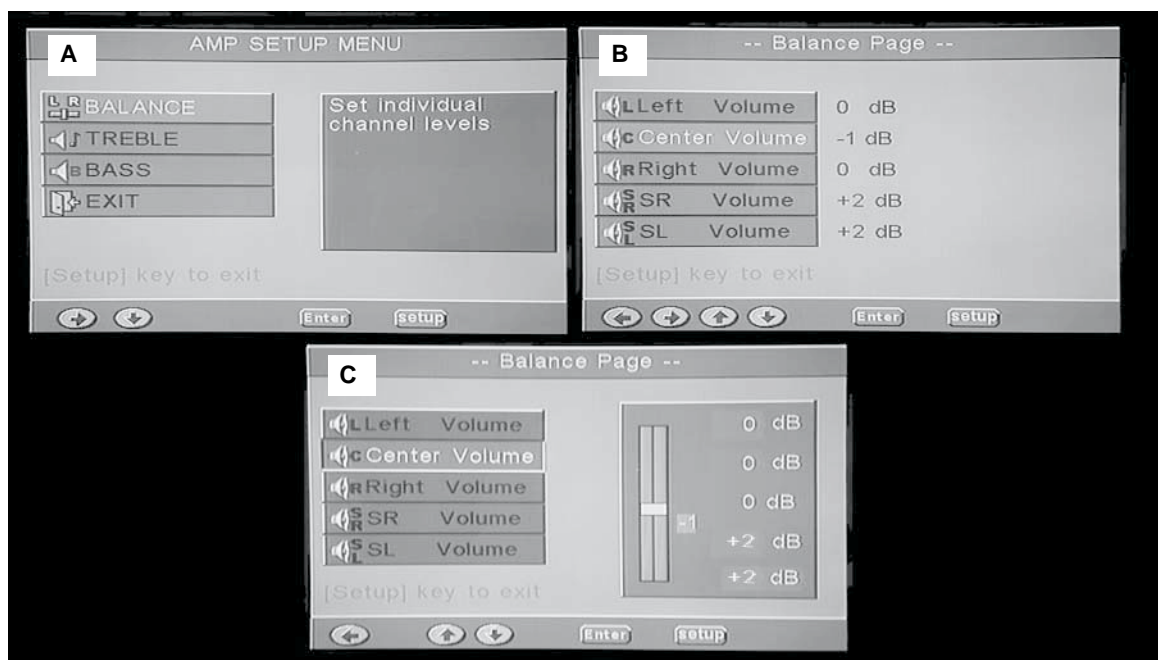
To estimate speaker output levels

1. From Stop, press SETUP. Use the navigation buttons to select SPEAKER, then Press ENTER.
2. Select TEST TONE. Use the navigation buttons to highlight ON, then press ENTER (see image below). A test tone will play on each channel in turn.
3. Using the front left and right speakers as a reference output level, note if the center, right rear or left rear speakers sounds louder or softer. Exit SETUP by pressing the SETUP button again.

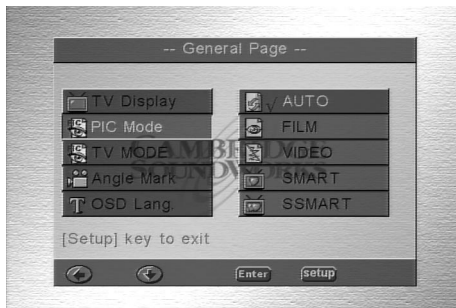


To adjust speaker output levels

1. Press VOL SETUP on the remote to view the AMP SETUP MENU (A).
2. Select BALANCE and press Enter to view the speaker list on the BALANCE PAGE. (See B).
3. Select a channel to adjust and press Enter. You will see an up or down adjustment screen (C). Adjust output with the navigation keys.
4. Repeat for any other channels requiring adjustment.
5. Press VOL SETUP to exit. Return to the Test Tone function to confirm your adjustments, if desired.



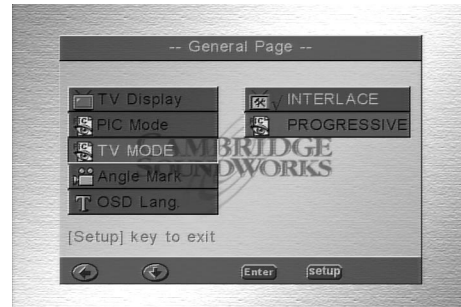
which means that the full 480 lines which make up each frame of the picture are split between two successive fields of 240 lines each. Progressive scan (480p) means that all 480 lines are displayed on each frame. It is up to the player to provide the best deinterlacing algorithm for the program content. The BOB method fills in the missing lines between each of the scan lines of an individual field with data interpolated from the lines above and below. The WEAVE method merges each pair of consecutive fields together to form each frame. The WEAVE method provides the highest resolution and is preferred for scenes with very little motion. The BOB method is preferred for motion-intensive scenes for its smoother handling of movement.



- **Auto** – Selects BOB or WEAVE based on “flags” embedded in the DVD bitstream that indicate that the original program was from an interlaced video source or a progressive video or film source.
- **Film** – Ignores the embedded flag information and uses the WEAVE technique.
- **Video** – Ignores the flag information and uses the BOB technique.
- **Smart** – Same as Film Mode with additional multi-tap vertical filtering to reduce the side effects of the WEAVE method on motion.
- **Super Smart (default setting)** – Combines flag reading with pixel-based motion adaptive processing which dynamically changes the parameters according to the instantaneous picture content. This is the best mode for deinterlacing virtually all source material.

TV Mode:

Select Progressive if your TV will support it. Otherwise use Interlaced (default).



Angle Mark:

Some DVDs feature scenes recorded with multiple camera angles. With Angle Mark on, the OSD will display the number indicating the angle selected.

OSD Lang(uage):

Select the language you prefer for the On Screen Display. Language choices will vary by region. English is the default for USA (Region 1).

Captions:

Sets the default language for closed captions on those discs which support it. If Captions are set to ON (default), you may turn them off or change them using the SUBTITLE button on the Remote Control. Some discs do not support this feature, or only support subtitle selection from the DVD menu only.

SCR(een) Saver:

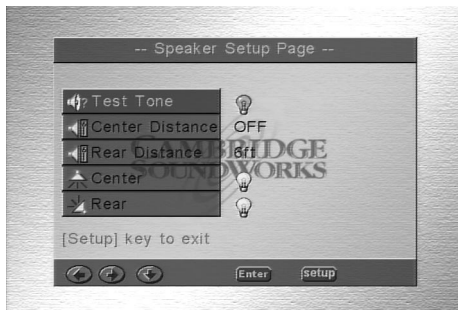
The AVS500 automatically activates a “bouncing ball” screen saver after a few minutes of inactivity. This will prevent burning an image on to the phosphors of a conventional picture tube or CRT-based projection TV. Plasma screens may also be damaged by prolonged exposure to a constant image.

LCD, DILA, or DLP based products do not normally require the screen saver.

Although we do not recommend it, you may turn the “bouncing ball” screen saver off. If you decide to defeat the Screen Saver, do not leave the player on for extended periods on any paused or still scene. This includes the AVS500's logo screen.

SPEAKER SETUP PAGE

Define the type and layout of your speakers, and balance their levels.



Test Tone:

Use this after you have defined the speaker layout using the menu selections below. When you select ON, a short burst of pink noise will be sent to each channel in turn. When the system is balanced, each speaker will play at the same apparent level when heard at the primary listening position. After selecting ON, let the tone cycle through all of the channels at least once. If any of the channels appear louder or softer than the main left and right channels, they should be adjusted to play at the same volume. The

buttons on the number keypad correspond to the speakers in corresponding positions on the picture in the menu.



1 – Left Front

2 – Center

3 – Right Front

4 – Subwoofer

7 – Left Surround

9 – Right Surround

Press the button corresponding to the speaker requiring adjustment. The Tone will stay on this speaker, use the volume **+/-** buttons to adjust the volume level. The Tone will stay on this channel for 5-seconds after you have completed adjustment. Select the next channel to adjust and repeat the process. Continue until all of the channels play at the same apparent volume level.

Hint: The adjustment may be made by ear; however, use of an inexpensive sound level meter such as Radio Shack #330-2050 may make the adjustment easier.

Center: Select ON if you have a center channel speaker (default).

Rear: Select ON if you have rear channel surround speakers (default).

Sub Woofer: Set ON if you have a separate subwoofer, or powered speaker system that does not have it's own bass management/crossover circuitry. Set OFF if your powered subwoofer or powered speaker system provides it's own bass management (default). The BassCube 851 and BassCube 821 both provide their own bass management.

Center Distance: If your center channel speaker is on the same plane, or further away than your main speakers set this to 0 ft. If the center channel is closer to the listener than the main speakers, set this to the closest approximation to how much closer (in feet) the center channel is to the listening position.



Rear Distance: Likewise, if the rear (surround) channels are closer to the listener than the front channels are, select the setting nearest to how much closer the surround channels are. If the surrounds are the same distance as, or farther away than, the front speakers set this to 0 ft.

Downmix:

If you do not have a surround speaker system connected to the AVS500, use this menu to select the way the unit outputs 2-channel sound.



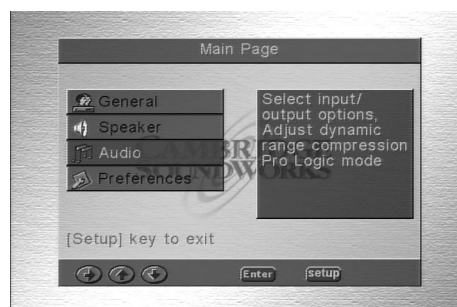
- **LT/RT** – sends the Left and Right channels of the 5.1 channel surround mix to the main left and right outputs.

- **STEREO** – Stereo remixes all of the main channels to the two stereo channels.
- **VSS** – Stands for Virtual Surround Sound. This function simulates an approximation of a true surround system using only two speakers.
- **Downmix Off (default)** – Use this setting for all applications with rear speakers.

Note: When making a STEREO recording from one of the A/V outputs, either set the DOWNMIX to STEREO or select a STEREO audio track when the source is a DVD.

AUDIO SETUP PAGE

Select the input and output formats, Pro Logic settings, and dynamic range options.



Audio Out: Leave on Analog (default) to use the conventional 5.1 outputs. Set to SPDIF/RAW to use the optical output (rear channel) or coaxial (front panel) output to feed an external Dolby Digital or DTS surround processor. Set to LPCM (Linear Pulse Code Modulation) to feed an outboard stereo D to A converter or Stereo-only digital input.

SPDIF IN: Leave off (default) for normal operation. Set to ON to send external SPDIF sources through the processor in lieu of the internal DVD player source. The AVS500 allows you to associate the SPDIF input with any of the external A/V sources regardless of the setting in this menu. Therefore there should be no reason to change this.

Dual Mono: The normal setting is STEREO.

- **L-MONO** – sends only the left channel signal to both Left and Right output channels.
- **R-MONO** – sends only the right channel output to both channels. These two selections are useful for some VCDs which may have one language on each channel in Mono.
- **MIX-MONO** – mixes both left and right channels, sending the resulting mono mix to both output channels. Use this when you are using a mono speaker/amplifier system, or older TV with a single speaker.

Dynamic: Controls the amount of dynamic range compression from FULL compression to no compression (OFF). You may freely adjust this to your taste. FULL compression is useful for low-powered speaker systems, or for low-level listening. This can be helpful for listening at reduced levels at night to avoid disturbing others. With FULL compression low-level dialogue

becomes louder, and loud passages are quieter. Turning the compression OFF will give the most realistic dynamic range with wide contrast between the loudest scenes and the quietest ones. This provides the full impact of the soundtrack. The default is OFF.

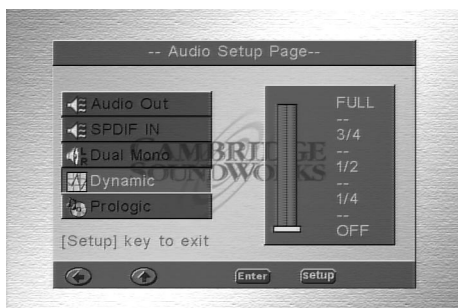
Pro Logic: Sets your preference for Pro Logic decoding of DVDs or external digital (SPDIF) sources.



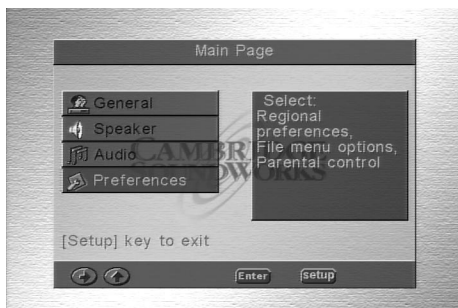
- **AUTO (default)** – Material containing a Dolby Digital 2.0 or 2.1 soundtrack will play back in Stereo unless flagged in the bitstream for Dolby Pro Logic. CDs and MP3s will play back in Pro Logic.
- **ON** – Dolby Digital 2.0 or 2.1 source material will play back in Pro Logic mode regardless of how it is flagged.
- **OFF** – All non-5.1 source material will play back in Stereo.

Note: Dolby Digital 5.1 or DTS soundtracks will take precedence over the settings in this menu and play back in their proper format. Also, when making a stereo recording of a disc source from one of the AVS500's A/V outputs, set Pro Logic OFF.

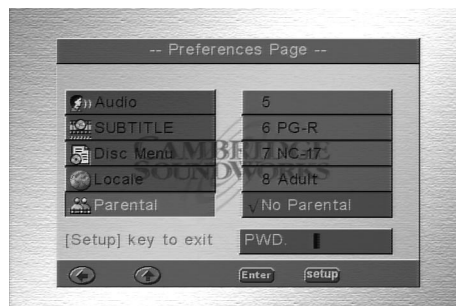
LPCM output: Lets you set the optical digital output sampling rate to 48kHz (default) or 96kHz.



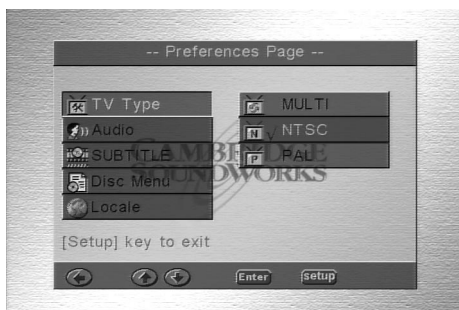
PREFERENCES PAGE: This is where you can select language options, TV standards, File Navigation style and Parental Controls.



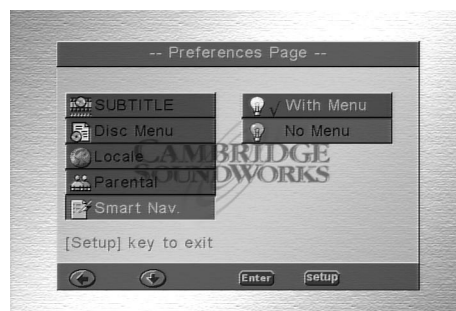
Parental: You may select a specific rating level which will require a password to view. The Default is No Parental, which will play all DVDs regardless of rating.



TV Type: Set to match your TV. In the USA, the TV standard is NTSC (default).



Smart Nav:



Audio: Selects the priority language (when available) for the disc audio track. You may choose English (default), French, Spanish, Chinese, or Japanese.

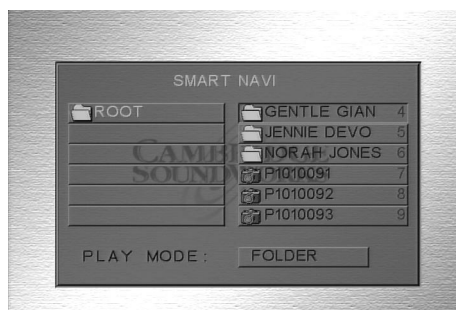
Subtitle: Selects the priority language for subtitles when supported by the disc.

Disc Menu Language: Selects the priority language of the disc menus, when supported by the disc.

Locale: Selects between the different parental lock standards of USA (default), China, France, Hong Kong, Japan, Taiwan, and Great Britain.

WITH MENU

- With Menu – The contents of the disc are displayed in the folder and file hierarchy as burned on the CD.



NO MENU

- No Menu – All of the files are at shown at the same level.



Defaults: Restores the original factory settings.

Password: Use to set your own personal password for the parental control settings. The default password is 3308.

SPECIFICATIONS

GENERAL

Supply Voltage: 90V~130V 50/ 60HZ

Power Consumption: 68W

Dimensions: 16 1/4" x 15 1/4" x 3 1/8" (410mm X 388mm X 80mm)

Weight: 11lb/5KG (13 lbs. shipping Weight.)

Operating Temperature: 5-40

Operational relative humidity: 15~75%

DVD

Compatible with: DVD, SVCD, VCD1.0/1.1/2.0, CDDA, HDCD, MP3, CD-G, KODAK PICTURE CD, CD-R, CD-RW

Composite input: CVBS 1.0vp-p 75 Ω

Composite output: CVBS 1.0vp-p 75 Ω

S-Video Y, C

Y = 1.0vp-p 75 Ω

C = 0.286vp-p/NTSC (0.3vp-p/PAL) 75 Ω

FM TUNER

Frequency Range: 87.5-108MHz

Usable Sensitivity: 1.3 V/13.2dBf

Signal-to-Noise Ratio: 70dB (mono), 68dB (stereo)

Distortion: 0.2% (mono), 0.3% (stereo)

Stereo Separation: 40dB @ 1kHz

Selectivity: 400kHz, 70dB

Image Rejection: 80dB

IF Rejection: 90dB

Tuner Output Level: 500mV at 1kHz, 75kHz Deviation

AM TUNER

Frequency Range: 520kHz-1710kHz

Signal-to-noise Ratio: 45dB

Distortion: 0.8% (1kHz, 50% Modulation)

Selectivity: 30dB at 10kHz

AUDIO

Audio Input: 0.5V – 2V

Audio Output: 0.5V – 2V

5.1 Channel Output: 1.0 V. p-p

Signal to Noise: >100dB ref. full output.

Dynamic Range: >90dB

Note: Cambridge SoundWorks subscribes to a policy of continuous improvement. As a result specifications and design may be subject to change without prior notice.

LIMITED WARRANTY

Cambridge SoundWorks, a Creative company, warrants the following Cambridge SoundWorks products for the periods indicated:

Loudspeakers for interior use without internal active amplifiers:

10 year limited parts and labor warranty from the product's Date Of Purchase (DOP) from an authorized Cambridge SoundWorks retailer.

Subwoofers for interior use:

10 year parts and labor on speaker elements, passive circuitry and cabinet workmanship from DOP. 2-year limited parts and labor warranty on the active amplifier circuitry from DOP.

MegaWorks speaker systems for interior use:

2-year limited parts and labor warranty from DOP.

MegaTheater AVS500 and other electronic source units for interior use:

1-year limited parts and labor warranty from DOP.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as specified below, this limited warranty covers parts and labor to correct all defects in materials and workmanship. The following are not covered by the warranty:

1. Damage, deterioration, malfunction or failure to meet performance specifications resulting from:
 - a. Accident, acts of nature, misuse, abuse, neglect or product modification.
 - b. Improper installation, removal or maintenance, or failure to follow instructions supplied with the product.
 - c. Repair or attempted repair by anyone not authorized by Cambridge SoundWorks to repair the product.
 - d. Any shipment of the product (claims must be presented to the carrier).
 - e. Any cause other than a product defect.
2. Cleaning, initial setup, checkups with no defects found, or charges incurred for installation, removal or reinstallation of the product.
3. Any product on which any serial number has been defaced, modified, or removed.
4. Batteries.
5. Accessories, including but not limited to batteries, cables, mounting hardware and brackets, cleaning accessories, antenna and detachable power cords.
6. Any product purchased outside the U.S.A., its possessions or territories.

WHO MAY ENFORCE THE WARRANTY

This limited warranty may only be enforced by the original purchaser.

WHAT CAMBRIDGE SOUNDWORKS, USA WILL PAY FOR

We will pay for all labor and material expenses for items covered by the limited warranty. Payment of shipping charges is discussed in the next section of this limited warranty.

HOW YOU CAN GET SERVICE

1. If you feel your unit needs service, contact Cambridge SoundWorks Return Authorization by calling toll-free (800) 367-4434. If we agree service is required, we will provide you with a Return Authorization number. Please do not return your unit to the factory prior to obtaining a Return Authorization.
2. You must pay any shipping charges to Cambridge SoundWorks. For repairs that are covered by this limited warranty, Cambridge SoundWorks will pay the return shipping charges to any destination within the fifty United States.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

Cambridge SoundWorks, USA's liability for any defective product is limited to repair or replacement of the product at Cambridge SoundWorks, USA's option. Cambridge SoundWorks, USA shall not be liable for damage to other products caused by any defects in Cambridge SoundWorks product, damages based upon inconvenience or loss of use of the product, or any other damages, whether incidental, consequential, or otherwise.

HOW STATE LAW RELATES TO THE WARRANTY

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty is enforceable only inside the U.S.A., its possessions or territories.

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